

REMARKS

Claims 1, 2, and 5-13 are pending in the application.

Claim Rejections - 35 U.S.C. § 103

(a) Claims 1, 2, 5, 8-10, and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Buelow, II et al. (USP 6,554,456) in view of Tsuchida (JP 11-327047), and further in view of Kojima (JP 2001-249405). This rejection is respectfully traversed.

Claim 1 has been amended to claim:

a converging lens, provided inside the second reflector portion, such that all of the light not reflected by the second reflector portion and passing through the converging lens are converged to the predetermined condensed spot.

This feature is shown in Fig. 1 of the present application. Applicants note that it is known in the art that a converging lens converges light passing through the lens to a predetermined spot on an optical axis as shown in the figure.

In the Office Action, the Examiner relies on the Kojima reference and alleges that it discloses the second reflector portion (5) and a lens (4) that condenses all of the outgoing light not reflected by the second reflector portion (5) such that the condensed outgoing light is directed to the predetermined condensed spot. The Examiner also takes a position that the irradiated object (7) as a whole corresponds to the “predetermined condensed spot” of the present invention.

Applicants respectfully submit that Kojima clearly states, for example, in paragraph [0037] that:

By the foregoing structure, as shown in Fig. 5, light that directly incident on the condenser lens 4 from the light source 1 can be obtained as light parallel to the light axis

2, and light directly reflected by the spherical reflecting mirror 3a is condensed at the light source 1 and incident on the condenser lens 4 and can be obtained as light parallel to the light axis 2. . . .

In other words, the condenser lens (4) of Kojima is a collimating lens that collimates light incident on the lens (i.e., outputs light parallel to the optical axis).

In the Office Action, the Examiner alleges that Tsuchida discloses a first reflector portion (4) and a second reflector portion (1), and outgoing light emitted from the arc tube is reflected by the first and second reflector portions so that the reflected light reaches a predetermined condensed spot outside the reflector.

In view of this, Applicants submit that even assuming that the Examiner's interpretation of the Tsuchida reference is reasonable, and that Buelow in view of Tsuchida can be combined with Kojima, which Applicants do not admit, one skilled in the art would, at best, modify Buelow in view of Tsuchida by placing the collimating lens (4) of Kojima inside the second reflector portion (1) of Tsuchida. However, the collimating lens (4) would collimate the light incident on the lens and would not converge the light to a single spot as shown in Fig. 1 of Tsuchida. Therefore, such a combination would render Tsuchida unsatisfactory for intended purpose.

Further, Applicants disagrees with the Examiner's interpretation that the irradiated object (7) as a whole corresponds to the "predetermined condensed spot" of the present invention because it is known in the art that a converging lens, as shown in Fig. 1, converges light incident thereon to a focal point, which is generally a spot or a point on an optical axis and not a surface.

In view of this, Applicants submit that Buelow, Tsuchida, and Kojima, taken singly or in combination, fail to disclose or suggest the “converging lens,” as recited in claim 1.

Claims 2, 5, 8-10, and 12, dependent on claim 1, are allowable at least for their dependency on claim 1.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

(b) Claims 6 and 7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Buelow in view of Tsuchida and further in view of Kojima, and further in view of Roberts et al. (USP 6,200,005). This rejection is respectfully traversed.

Claims 6 and 7, variously dependent on claim 1, are allowable at least for their dependency on claim 1.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

(c) Claim 11 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Buelow in view of Tsuchida and further in view of Kojima, and further in view of Lapatovich (USP 6,566,817) and Ishino et al. (USP 7,234,845). This rejection is respectfully traversed.

Claim 11, indirectly dependent on claim 1, is allowable at least for its dependency on claim 1.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

(d) Claim 13 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Buelow in view of Tsuchida and further in view of Kojima, and further in view of Wedell (USP 5,535,111). This rejection is respectfully traversed.

Claim 13, dependent on claim 1, is allowable at least for its dependency on claim 1.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

Conclusion

Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and objections, and allowance of the pending claims are earnestly solicited.

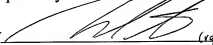
In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Maki Hatsumi Reg. No. 40,417 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

for By  (reg. # 40,417)
Michael R. Cammarata
Registration No.: 39,491
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicants